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High stakes testing: does secondary education examination involve any risks?

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Abstract

The aim of this study is to determine the 6th-8th grade elementary school students' opinions regarding the possible risks Secondary School Examination (SSE), which they take in order to continue to the secondary education, might have. 665 students from Ankara and Istanbul participated in the study, and the data was collected using a survey that was developed by the researchers. According to the results of the study, the examination (SEE), which is conducted in order to place the test-takers in the secondary schools, falls short in reflecting the students' achievement and achievement in real life situations. What is more, the results suggest that the test (SEE) creates negative effects on students such as fear of being unachievementful, test anxiety, and some health problems.

Keywords: High stakes testing, secondary school examination (SSE), selection and placement tests

1. Introduction

Today, the national education ministries of many countries attach special importance to studies that focus not only on monitoring the quality of education given at schools, but also on determining the extent to which the students are able to use the information and skills, which they attain at school, in their daily lives. Such studies, which are also called "Large Scale Tests", and their outcomes are evaluated by various educational shareholders such as teachers, instructors, administrators, parents, students, decision-makers that make the educational policies, and non-governmental organizations (NGOs). In this framework, close connections are made between the achievement of the schools/educational institutions and their students' achievement in these tests. On the one hand, tests that aim to monitor students' school achievement (Student Achievement Test -SAT-) are conducted in Turkey on a national scale; and on the other hand, students from Turkey take international tests of the same scope (PIRLS, TIMSS and PISA). Turkey also uses the results of three different tests in order to obtain information as to the school achievement of her students: a) Secondary Education Examination (SEE), used for the placement of students into secondary level educational institutions; b) Higher Education Examination (HEE), used for the placement of students into higher level educational institutions after secondary schools; and finally c) Undergraduate Placement Examination (UPE). Educational shareholders affirm that the results of such placement and achievement tests can

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be used as sources of information while determining student achievement levels and giving decisions regarding their school achievement. (Berberoğlu and Kalender, 2005; Aslanoğlu, 2007). Sometimes, however, such test results are unnecessarily overused and exaggerated in that they go beyond their real purposes; even teachers and schools are compared and forced into a competitive atmosphere based on these results. As a result of such misuse, these tests, which can be exploited in order to monitor student achievement and to make decisions concerning their educational development, may be harmful on school education, let alone their benefits. In literature, this concept is expressed as "high stake testing or assessment" (Jones, Jones and Hargrove, 2003; Meier, 2002; Hamilton, Stecher and Klein, 2003).

High stakes testing or assessment is defined as the exams that students need to pass in order to finish a school, to enter an education program, to attend a university, to be able to get a scholarship, or to obtain proficiency for an application (Cizek, 2001; Resnick, 2004). Besides, this term is also used for the exams or tests, whose results are very important for its test-takers, and which impose high concern and anxiety on them (Casbarro, 2004). Such tests are thought not only to deteriorate the quality of education, but also to be inefficient in determining the actual achievement of the students. It has also been emphasized that the teachers tend to teach what is in the scope of the exams rather than the content specified in their curricula; in other words, they are inclined to teach the test itself (Etsey, 1997; Hess, 2002; Johnson, 2007). In literature, it has been indicated that high stakes assessment does have positive effects besides negative ones. For instance, several researchers suggest that high stakes testing improves coordination and cooperation among teachers (Marshall, 2003), helps the teachers to adapt to student-centered approaches (Jones, Jones and Hargrove, 2003), and increases the motivation of the students (DeMoss, 2002). When the results that the students obtain from high stakes tests are used as the basis for either punishment or reward for schools, administrators and even for teachers, some undesirable outcomes may appear (Looney, 2009), such as:

- Students, administrators and teachers feel under stress.
- Teachers are inclined to teach the scope of the test items and questions (content, knowledge dimension, i.e.) teaching the test
- Teachers recognize a teaching approach that prioritizes the cognitive processes, with which the students can be achievementful merely in the test, and they tend to disregard affective and psycho-motor skills, which are extremely difficult to assess in such tests.
- Teachers (particularly private educational institutions that prepare the students for such tests) close their eyes to the necessity of students' attainment of basic skills specified in the educational curricula, and they begin to prefer an education approach which highlights the significance of test technique.

In Turkey, among the high stakes tests is Secondary Education Examination (SEE), the results of which are used for placement of students in Science High Schools, Technical High Schools i.e. From this perspective, it is of great importance that opinions of the students who will take Secondary School Exam are found out on whether they believe that SEE involves risks or not. Thus, this study has been conducted in order to find out the students' opinions as to SEE's possible risks. In this framework, the following research questions are posed:

1. What is the distribution of the participant students according to their levels with regards to the following variables: attending an additional private institution (dershane), taking private lessons, experiencing exam anxiety, having a health problem due to exam anxiety?
2. According to the participant group, what are the characteristics of the students who are achievementful in SEE?
3. How do the participants students' social activities differ between the group of students who attend an additional private education institution and those who do not?
4. Which activities are performed in order to enhance the SEE achievement of the students in their schools, and how often are they performed?
5. How do physiological and psychological problems that the students experience while preparing for SEE differ according to the number of test items they solved, their exam anxiety, and the feeling that they are being used as if they are some test mice.

2. Method

In this study, students' opinions and ideas about (attitudes towards) SEE have been asked and their ideas have been reflected and described as genuinely as possible. Therefore, this is a survey study (Karasar, 2004).

2.1. Participants

This study was conducted in 2009-2010 academic year in Ankara and İstanbul and 665 students participated in the study. The participant students were 6th, 7th, and 8th graders in private and state elementary schools. The distribution of the participants according to their cities, education levels, school type and gender is given in Table 1 below:

Table 1. The distribution of the participant students according to their cities, education levels, school type and gender

City		Gender		School Type		Education Level		
		Female	Male	Private School	State School	6th Grade	7th Grade	8th Grade
Ankara	N	177	166	136	209	138	106	101
	%	54,1	49,7	43,2	59,7	56,6	51,2	47,2
İstanbul	N	150	168	179	141	106	101	113
	%	45,9	50,3	56,8	40,3	43,4	48,8	52,8
Total	N	327	334	315	350	244	207	214

As illustrated in Table 1, there is a close distribution among students of two different cities according to their gender, education level and school type; however, the number of students that participated in the study from state schools is higher than those from private schools since more state schools gave permission for the research.

2.2. Data Collection and Analyses

The data for the study was collected using a "student survey" that was devised and implemented by the researchers. In addition to questions that aimed to gather demographic and personal information as to the participants' gender, education level, school type, whether they attended a private course / took private lessons or not, the survey included items that elicited students' attitudes and opinions on SEE as well as the positive-negative effects that SEE had on them. While devising the survey, a literature review was conducted. Later, expert opinion was obtained about the survey from teachers and assessment-evaluation experts. Making use of the expert opinions, necessary changes were made in the survey and it was given its final shape. The frequencies and the percentages of students' answers were analyzed by forming participant groups according to their education levels (e.g. 6th graders, 7th graders, etc).

3. Results and Discussion

The results obtained from the analysis of the data are discussed separately for each grade. The distribution of participant students according to their personal information as to the afore-mentioned variables of the study, namely a) attending a private institution (dershane), b) taking private lessons, c) experiencing exam anxiety and d) having health problems due to this anxiety is presented in Table 2 below:

Table 2. The distribution of participants according to the variables regarding SEE

Variables Regarding Secondary Education Examination (SEE)		Level of Education (Grade)					
		6th Grade		7th Grade		8th Grade	
		N	%	N	%	N	%
Do they attend a private educational institution	Yes	85	35,0	96	46,6	130	60,7

(dershane)?	No	158	65,0	110	53,4	84	39,3
Do they take private lessons?	Yes	44	18,0	43	20,9	63	29,6
	No	200	82,0	163	79,1	150	70,4
Do they experience exam anxiety?	Yes	164	67,5	132	64,4	145	68,4
	No	79	32,5	73	35,6	67	31,6
Do they have any health problems due to exam anxiety?	Yes	23	9,5	22	10,7	35	16,4
	No	220	90,5	183	89,3	178	83,6

Table 2 demonstrates that as the students' educational levels increase (as they move up in grades), so do their percentages of attending a private institution (dershane), taking private lessons, and having health problems due to test anxiety. Nonetheless, as Table 2 suggests, students' rate as to experiencing exam anxiety do not have significant difference according to their education levels.

In their study, Baltaş, Zeyrek, Uysal and Küçük (1988) have investigated how much the students, who attend private institutions, are affected by the test anxiety, and they have found their participants' level of test anxiety to be very high. Also, Kutlu (2001) has concluded in his study that senior secondary school students (12^{th} graders), who are confident about their University Entrance Exam (UEE) preparations and feel relatively unstressed, not only have lower anxiety levels, but also receive higher scores. However, he also found out that the students high level of anxiety is due to the tests' own structural features.

According to the opinions participants, the characteristics of secondary school students who can be achievementful in SEE and distribution of these students regarding their perceived achievement rate are given in Table 3 below:

Tablo 3. According to the opinions of the participants, the characteristics of secondary school students who are achievementful in SEE and distribution of these students regarding their perceived achievement rate

Characteristics of secondary school students who are achievementful in SEE		Achievement Rate				
		Never Achievementful	Rarely Achievementful	Averagely Achievementful	Highly Achievementful	Fully Achievementful
Students who memorize what is taught in the lesson	N	99	164	212	116	72
	%	14,9	24,7	32,0	17,5	10,9
Students who make use of various resources in their studies	N	12	46	160	259	187
	%	1,8	6,9	24,1	39,0	28,2
Students who search different sources of information while studying	N	23	56	150	234	197
	%	3,5	8,9	22,7	35,4	29,9
Students who use what they learn in the class	N	24	81	133	208	214
	%	3,6	12,3	20,2	31,5	32,4
Students who completely do the exercises that the teachers assign	N	22	53	108	199	280
	%	3,3	8,0	16,3	30,1	42,3
Students who use computers	N	35	139	244	135	109
	%	5,3	21,0	36,9	20,4	16,5
Students who regularly do the exercise tests in their test books	N	8	49	92	184	325
	%	1,2	7,4	14,0	28,0	49,4
Students who attend private education institution regularly every year	N	117	85	151	147	160
	%	17,7	12,9	22,9	22,3	24,2

As indicated in Table 3, participants believe that students who are particularly achievementful in the test are those *who completely do the exercises that the teachers assign*, and those *who regularly do the exercise tests in their test books*. Additionally, participants think that students *who use what they learn in the class, who search different sources of information while studying,* and *who make use of various resources in their studies* are achievementful, too. What is more, participants perceive that *making use of computers* is a variable that averagely contribute to students test achievement.

Another significant finding of the study is related to students' attending private educational institutions (dershanes) regularly in order to be achievementful in SEE. Participant students think that *attending an additional private educational institution (dershane) regularly every year* does not have a significant effect on students' SEE achievement. Moreover, participants believe that *memorizing what is taught in the lesson* does not contribute to students' achievement in SEE.

The distribution of activities carried out by the students (who attend an additional private educational institution and who do not) and the frequencies of these activities are presented in Table 4 below.

Tablo 4. The distribution of activities carried out by the students and the frequencies of these activities according to their private institution attendance

Activities	Attending a private institution	Frequency of Activities									
		Never		Rarely		Once a month		Once in every 15 days		Once a week	
		N	%	N	%	N	%	N	%	N	%
Going to the movies	Yes	54	17,4	84	27,1	102	32,9	55	17,7	15	4,8
	No	93	26,6	77	22,1	115	33,0	49	14,0	15	4,3
Going to the theater	Yes	116	37,4	120	38,7	50	16,1	16	5,2	8	2,6
	No	126	36,1	132	37,8	73	20,9	7	2,0	11	3,2
Doing Sports	Yes	31	10,1	23	7,5	32	10,4	32	10,4	190	61,7
	No	30	8,7	18	5,2	28	8,1	32	9,3	237	68,7
Reading books, magazines, etc.	Yes	18	5,9	21	6,8	51	16,6	48	15,6	169	55,0
	No	31	9,0	14	4,1	43	12,5	53	15,4	204	59,1
Going to concerts and musical performances	Yes	96	31,4	112	36,6	61	19,9	23	7,5	14	4,6
	No	109	31,8	107	31,2	60	17,5	27	7,9	40	11,7
Visiting museums and historical places	Yes	91	29,5	143	46,4	58	18,8	12	3,9	4	1,3
	No	120	34,6	149	42,9	48	13,8	19	5,5	11	3,2
Travelling for touristic purposes	Yes	97	31,5	153	49,7	34	11,0	13	4,2	11	3,6
	No	149	42,9	128	36,9	45	13,0	11	3,2	14	4,0
Surfing on internet	Yes	23	7,5	9	2,9	29	9,4	30	9,7	217	70,5
	No	54	15,6	15	4,3	19	5,5	44	12,7	214	61,8

The distribution of activities carried out by the students and the frequencies of these activities according to their private institution attendance are scrutinized, it can be seen that the students who attend a private institution and those who do not share similar percentages; however, it may be claimed that the students who do not attend a private institution take part in relatively more activities than those who do.

The results indicate that students do not participate much in activities such as going to see theatrical plays, going to the concerts and musical performances, visiting museums and historical attractions, and travelling for touristic purposes. Instead, they prefer spending time on *surfing on internet, doing sports and reading books*. Students also specified that they *go to the movies* once a month or even once a year.

The activities conducted by the schools of the students in order to increase their SEE achievement and the frequencies of these activities are presented in Table 5 below.

Tablo 5. The activities conducted by the schools of the students in order to increase their SEE achievement and the frequencies of these activities

Activities		Frequency of the Activities				
		Never	Rarely	Sometimes	Usually	Always
Frequently, tests are implemented at the school in order to increase SEE achievement	N	46	57	142	213	205
	%	6,9	8,6	21,4	32,1	30,9
Our teacher solves and answers sample SEE questions in the class	N	32	54	137	208	232
	%	4,8	8,1	20,7	31,4	35,0
Tests prepared by private educational institutions are implemented at our school	N	114	104	155	158	131
	%	17,2	15,7	23,4	23,9	19,8
Tests questions similar to those of SEE are practiced in our lessons	N	61	77	139	207	178
	%	9,2	11,6	21,0	31,3	26,9
Additional lessons are given at our school for SEE preparation.	N	159	66	108	141	185
	%	24,1	10,0	16,4	21,4	28,1
SEE practices are carried out at our school in music, art and physical training lessons	N	340	106	98	54	65
	%	51,3	16,0	14,8	8,1	9,8
Our school supports us in SEE preparation by allocating a special department or teachers.	N	113	88	144	160	157
	%	17,1	13,3	21,8	24,2	23,7

As presented in Table 5, the participants mostly gathered around the following statements: *"frequently, tests are implemented at the school in order to increase SEE achievement", "our teacher solves and answers sample SEE questions in the class", "tests prepared by private educational institutions are implemented at our school",* and *"tests questions similar to those of SEE are practiced in our lessons*". When the student responses and their percentages in favor of the statements *"additional lessons are given at our school for SEE preparation"* and *"our school supports us in SEE preparation by allocating a special department or teachers"* are taken into consideration, it can be claimed that tests questions are answered and practiced in the lessons at schools, and that teachers tend to carry out their lessons based on test preparation and sample question practices.

In Table 6 below, the distribution of physiological and psychological problems that the students experience while getting prepared for SEE is presented according to the number of test questions the students answer, their test anxiety level, and their feeling that they are being treated as if they are some test mice.

Tablo 6. The frequency of physiological and psychological problems that the students experience while getting prepared for SEE according to various variables

Problems	Variables	Frequency				
		Never	Rarely	Sometimes	Usually	Always
Having a psychological breakdown	Sts who answer 101+more items	29,3	27,4	17,5	13,5	12,3
	Sts who experience test anxiety	25,9	23,4	20,4	18,9	11,4
	Sts who feel as test mice	24,7	24,3	18,7	18,3	14
Increase in the uncontrolled body movements	Sts who answer 101+more items	66,8	11,6	8,2	8,6	4,8
	Sts who experience test anxiety	63,9	12,6	9,4	8,3	5,8
	Sts who feel as test mice	65,1	12,9	9,3	7,5	5,2
Intolerance in personal relations	Sts who answer 101+more items	47,1	18,0	18,0	11,2	5,7
	Sts who experience test anxiety	38,1	19,7	19,8	13,5	8,9
	Sts who feel as test mice	38,3	18,0	19,5	16,9	7,3
Inconsistency in relationships with friends	Sts who answer 101+more items	48,4	20,3	16,3	7,5	7,5
	Sts who experience test anxiety	43,2	20,1	18,3	10,2	8,2
	Sts who feel as test mice	41,9	20,9	19,6	9,2	8,4
Feeling lonely (being introvert)	Sts who answer 101+more items	44,3	20,2	9,8	13,3	12,4
	Sts who experience test anxiety	33,0	24,1	13,7	15,3	13,9
	Sts who feel as test mice	37,9	19,6	14,4	16,2	11,9
Feeling unhappy (not enjoying the life)	Sts who answer 101+more items	36,9	14,3	14,5	14,5	19,8
	Sts who experience test anxiety	26,9	17,5	15,9	17,8	21,9
	Sts who feel as test mice	25,2	17,2	15,8	18,5	23,3
Anxiety about not being able to reach the goals (stress)	Sts who answer 101+more items	14,7	14,6	17,5	22,8	30,4
	Sts who experience test anxiety	8,8	11,2	15,9	27,8	36,3
	Sts who feel as test mice	13,2	11,2	12,5	26,8	36,3
Fear of failure	Sts who answer 101+more items	11,3	15,2	21,4	20,5	31,6
	Sts who experience test anxiety	5,3	11,4	17,9	23,2	42,2
	Sts who feel as test mice	10,8	12,2	14,5	21,0	41,5
Over reaction and sudden anger	Sts who answer 101+more items	18,7	20,2	14,7	16,4	30,0
	Sts who experience test anxiety	14,5	20,4	14,8	18,9	31,4
	Sts who feel as test mice	17,4	14,9	13,9	19,5	34,3

According to the results given in Table 6, the students, who think they experience test anxiety, who believe they answer too many test questions, and who feel they are being treated as if the subjects of some test, indicated that *they have a lot of stress,* that *they have a fear of failure,* that *they are anxious about not being able to reach their goals,* and that *they overreact to events accompanied by sudden anger.*

4. Conclusion and Implementations

According to the results of the study, the examination (SEE), which is conducted in order to place the test-takers (students) in the secondary schools, falls short in reflecting the students' achievement and achievement in real life situations. What is more, the results suggest that the test (SEE) creates negative effects on students such as fear of being unachievementful, test anxiety, and some health problems. In related previous studies, it has been reported that fear of failure or test anxiety in students result not only in physiological problems such as respiration difficulty,

tension in muscles, anomalies in body functions, but also in psychological outcomes and negative behaviors such as feeling humiliated, being compared to others, feeling of a ruined future, unwilling to study or take the test, and willing to finish the test rapidly and leave the room as soon as possible (Sakarya, 1996; Baltaş 1997; Keskin, 2001).

The results of small-scale examinations and tests (intra-city tests), which have been conducted to determine students' achievement, as well as the results of international exams such as PISA, TIMMS and PIRLS indicate that the overwhelming majority of the students possess low levels of mathematical-verbal literacy and skills (TED, 2010). An attempt to assess students' accumulative knowledge, which they attained during the whole education and training process, by only one exam or test results in the students' tendency and willing not only to attend additional private educational institutions (dershanes), but also to take private lessons in order to develop their multiple-choice test techniques and practical test skills; and thus, this tendency decreases the quality of schools and causes problems in the education system. Consequently, not only the purpose of the test (SEE), which is conducted for placement of students in secondary education institutions, but also how its results should be evaluated and used ought to be reexamined. What is more, further research needs to be conducted on a larger scale including the teachers, administrators and parents.

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